

# Delivering safe care for patients: all healthcare providers play a role

## Get Smart About Antibiotics Week

Tuesday, November 15, 2011



### Did you know?

1. Antibiotic resistance is one of the world's most pressing public health threats.
2. Antibiotics are the most important tool we have to combat life-threatening bacterial diseases, but antibiotics can have side effects.
3. Antibiotic overuse increases the development of drug-resistant germs.
4. Patients, healthcare providers, hospital administrators, and policy makers must work together to employ effective strategies for improving antibiotic use – ultimately improving medical care and saving lives.

### Scope of the Problem

Today, infections with antibiotic-resistant bacteria have become increasingly common in healthcare and community settings. Antibiotic resistance occurs when germs change in a way that reduces or eliminates the effectiveness of the drugs available to treat them. Many bacteria have now become resistant to more than one type or class of antibiotic and widespread overuse and inappropriate use of antibiotics is fueling resistance that compromises the effectiveness of important patient treatments. Overuse of antibiotics also increases the problems of drug side effects, allergic reactions, diarrheal infections caused by *Clostridium difficile*, or even death.

#### Antibiotic resistance is associated with:

- Increased risk of hospitalization
- Increased length of stay
- Increased hospital costs
- Increased risk of transfer to the intensive care unit
- Increased risk of death

### Inpatient Settings

- Antimicrobial resistance adversely impacts the health of millions of hospitalized patients every year.
- Of the patients receiving antibiotics, half (50%) will receive unnecessary or redundant therapy, resulting in overuse of antibiotics.
- Unnecessary use of antibiotics creates risk of adverse drug events and *Clostridium difficile* with no benefits to patients. *C. difficile* is a serious diarrheal infection and is on the rise.
- Some infections in hospitals are now resistant to all available antibiotics.

### Outpatient Settings

- Each year, tens of millions of antibiotics are prescribed unnecessarily for viral upper-respiratory infections.
- In states where there is more antibiotic use, there are more antibiotic-resistant pneumococcal infections.
- Antibiotic use in primary care is associated with antibiotic resistance at the individual patient level.
- The presence of antibiotic-resistant bacteria is greatest during the month following a patient's antibiotic use and may persist for up to 12 months.

## Why we must act now

- The way we use antibiotics today or in one patient directly impacts how effective they will be tomorrow or in another patient; they are a shared resource.
- Antibiotic resistance is not just a problem for the person with the infection. Some resistant bacteria have the potential to spread to others – promoting antibiotic-resistant infections.
- Since it will be many years before new antibiotics are available to treat some resistant infections, we need to improve the use of antibiotics that are currently available.

## Healthcare providers can

### Prescribe correctly

- Refrain from treating viral syndromes with antibiotics, even when patients ask for them.
- Prescribe the right antibiotic at the right dose for the right duration; be familiar with resistance trends in your region.
- Avoid unnecessary overlaps in antibiotics. It is not usually necessary to give two antibiotics to treat the same bacteria.

### Collaborate with each other and with patients

- Talk to your patients about appropriate use of antibiotics.
- Include microbiology cultures when placing antibiotic orders.
- Work with pharmacists to counsel patients on appropriate antibiotic use, antibiotic resistance, and adverse effects.
- Utilize patient and provider resources offered by CDC and other professional organizations.

### Stop and assess

- Take an “antibiotic timeout” when a patient’s culture results come back in 24 to 48 hours. Stop and assess the use of antibiotics, using them only when indicated to avoid promoting the development of resistance among bacteria and unnecessary antibiotic exposure.

### Embrace antibiotic stewardship

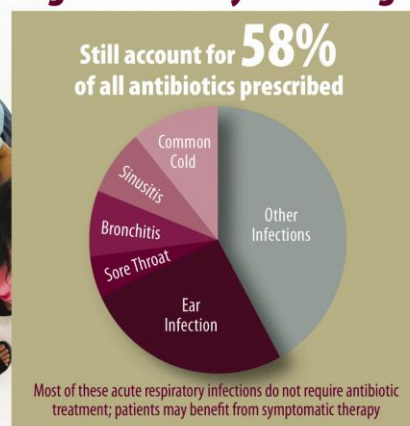
- Improve antibiotic use in all facilities—regardless of size—through stewardship interventions and programs, which will improve individual patient outcomes, reduce the overall burden of antibiotic resistance, and save healthcare dollars.
- Recognize and participate in the United States’ fourth annual Get Smart about Antibiotics Week, November 14-20, 2011, an international collaboration that coincides with Canada’s Antibiotic Awareness Week and European Antibiotic Awareness Day on November 18, 2011.

## Good News / Bad News

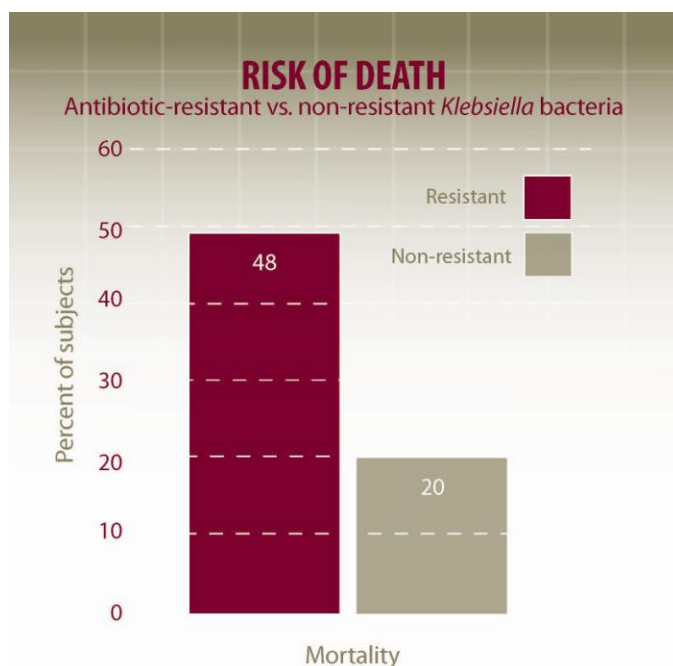
### Antibiotics prescribed for acute respiratory infections in kids younger than 15 years of age



\*Comparing 1993–94 to 2007–08



Source: MMWR, 2011;60:1153-6



Source: Patel et al. Infect Control Hosp Epidemiol 2008;29:1099-1106



### Centers for Disease Control and Prevention

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